

S/N 09/135,413

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Leonard Forbes et al.

Serial No.: 09/135,413

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Title: METHOD FOR OPERATING A TRANSISTOR HAVING AN AMORPHOUS SILICON CARBIDE GATE INSULATOR



Examiner: Viet Q. Nguyen

Group Art Unit: 2818

Docket: 303.354US2

PATENT

fee ok

3-23-00

L Spruell

**AMENDMENT AND RESPONSE**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Applicant has reviewed the Office Action mailed on December 13, 1999. Please amend the above-identified patent application as follows.

**IN THE CLAIMS**

Please amend the following claim:

52. (Twice Amended) The method of claim 28 wherein programming [the] a floating gate [transistor] electrode further comprises causing hot electron injection from the channel through an amorphous silicon carbide (a-SiC) gate insulator to the floating gate electrode.

Please add the following new claims:

36. (New) A method of using a floating gate transistor, comprising:  
programming a floating gate electrode of the floating gate transistor by placing a charge on the floating gate electrode, wherein the floating gate transistor has a barrier energy between the floating gate electrode and a silicon carbide (SiC) gate insulator separating the floating gate electrode from a substrate, the barrier energy being less than approximately 3.3 eV;

reading the floating gate transistor by placing a read voltage on a control gate and detecting current in a channel between a source region and a drain region in the substrate; and  
erasing the floating gate transistor.